Name:

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Geometry, Period

Due Date: Mon, 30 Mar 2015

**Geometry**

**Homework**



***Fill in the blanks. Demonstrate each statement by marking the figure to the right.***

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| 1) **Parallelogram**   1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sides are parallel 2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sides are also \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. The opposite angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_bisect each other 5. All \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles are supplementary |
| 2) **Rectangle**   1. All properties of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ apply to rectangle 2. All angles are \_\_\_\_\_\_\_\_\_\_\_ angles 3. The diagonals are \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3) **Rhombus**   1. All the properties of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ applies to rhombus 2. All the \_\_\_\_\_\_\_\_\_\_\_\_\_ are congruent (rhombus is equilateral) 3. The \_\_\_\_\_\_\_\_\_\_\_\_ bisect the angles 4. The diagonals are \_\_\_\_\_\_\_\_\_\_\_\_\_ bisectors of each other 5. The diagonals divide the rhombus into \_\_\_\_\_\_\_congruent right triangles |
| 4) **Square**   1. All properties of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ apply to square 2. All properties of rhombus also apply to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ form four isosceles right \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3) **Kite**   1. Two pairs of consecutive sides are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are perpendicular 3. One diagonal is perpendicular \_\_\_\_\_\_\_\_\_\_ of the other 4. One pair of\_\_\_\_\_\_\_\_\_\_\_\_ angles are congruent |
| 6) **Isosceles Trapezoid**   1. The legs are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. The bases are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. The upper base angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. The \_\_\_\_\_\_\_\_ base angels are also congruent 5. The \_\_\_\_\_\_\_\_\_\_ are congruent 6. Any lower base angle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to any upper base angle |

**II. Directions:** Match the description with ***all*** the terms that fit it.

**a. Trapezoid b. Isosceles triangle c. Parallelogram d. Rhombus**

**e. Kite f. Rectangle g. Square h. All quadrilaterals**

1. \_\_\_\_\_\_\_\_\_\_\_Diagonals bisect each other.
2. \_\_\_\_\_\_\_\_\_\_\_Diagonals are congruent.
3. \_\_\_\_\_\_\_\_\_\_\_Opposite sides are congruent.
4. \_\_\_\_\_\_\_\_\_\_\_Both diagonals bisect angles.
5. \_\_\_\_\_\_\_\_\_\_\_Diagonals are perpendicular.
6. \_\_\_\_\_\_\_\_\_\_\_Measure of interior angles sum to 360°
7. \_\_\_\_\_\_\_\_\_\_\_Opposite angles are congruent.
8. \_\_\_\_\_\_\_\_\_\_\_Diagonals are perpendicular bisector of each other.

**III. Directions:** Show all work.

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| 1) Find the measurements of angle B, C, and D. | 6) Which of the following quadrilaterals have diagonals that are perpendicular?   1. Parallelogram 2. Rhombus 3. Square 4. Kite 5. I 6. II and III only 7. II, III, and IV 8. II and IV only 9. All of the above   To prove your answer above, draw four different diagrams with their diagonals.   |  |  | | --- | --- | | Parallelogram | Rhombus | | Square | Kite | |
| 7) If one diagonal of a rhombus is 10 cm and the other 24 cm, how long is each side of the rhombus? |
| 8) Find the length of DE if DEFG is a square.   1. 5 2. 5 3. 6 4. 6   Justify your answer in a sentence:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |